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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,454	03/26/2004	David A. Beck	VOI0203.CON	9331

7590

12/21/2005

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EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,454	BECK, DAVID A.	
	Examiner	Art Unit	
	Eric Hug	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 24-33, 38-43 and 45-56 is/are rejected.
- 7) ☒ Claim(s) 17-19, 22, 23, 34-37 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 17 and 19 are objected to because they recite the phrase "anti-wet fabric" where it should recite "anti-rewet fabric", the latter phrase being the terminology used in the preceding claims and elsewhere.

Claim 18 is objected to for reciting "said first fabric" where it should recite "said first anti-rewet fabric".

Claim 19 is also objected to for reciting "said second anti-wet fabric" where it should recite "said second fabric". Preceding claim 17 refers to a "second fabric".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 4 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "very coarse" is a relative term which renders the claim indefinite. The term "very coarse" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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2. Claims 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "said enclosure". There is insufficient antecedent basis for this limitation in the claim. Claim 18 depends on claim 17.

Claim 19 recites the limitations "said first anti-wet fabric" and "said second anti-wet fabric". There is insufficient antecedent basis for these limitations in the claim. As noted above, these two limitations are also incorrectly worded.

Claim 20 recites the limitation "said second fabric". There is insufficient antecedent basis for this limitation in the claim. Claim 21 depends on claim 20.

3. Claims 24-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 24 and 25 recite the limitation "at least one fabric". It is uncertain which fabric is being referred to. Claim 26 depends on claim 25.

4. Claims 45-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 45 is directed to a clothing for a press unit, but claims "a first anti-rewet fabric" and a "second fabric", so it is not a clothing per se, but a combination of two fabrics that is being claimed. Nowhere in the specification is the term "clothing" used, so it cannot be determined how a "clothing" relates to the anti-rewet fabric.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 27, 28, 30-33, and 38-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeffrey (WO 98/56982).

Jeffrey discloses a paper machine clothing for use as a press felt in the press section of a paper machine, wherein the clothing comprises a web-contacting layer made of fibrous batt, which is equivalently the claimed air-distribution layer, and comprising at least one supporting layer made of an apertured thermoplastic membrane, which is equivalently the claimed perforated film layer. One of the functions of the clothing is to prevent re-wet of a paper web as the clothing and web exit a press nip. The layers are secured together by means of adhesive, ultrasonic welding, or needling (page 4, lines 10-12).

Jeffrey gives by way of example the size and separation of the apertures on page 5, first paragraph. The aperture area for the uppermost thermoplastic layer is $0.6\text{-}1.2\text{ mm}^2$, and the aperture center-to-center spacing is $1.25\text{-}1.75\text{ mm}$. The aperture area for the lowermost layer is $1.21\text{-}1.8\text{ mm}^2$, and the aperture center-to-center spacing is $1.75\text{-}2.25\text{ mm}$. The apertures are described as being square or rectangular in both layers.

For the uppermost layer and assuming square apertures, an aperture length is 0.775 to 1.095 mm (obtained by taking the square root of the area). Using the smaller size of 0.775 mm and smaller spacing of 1.25 mm , one aperture can be found for approximately every 2 mm of

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length of the layer. In 1 meter of length there will be 500 apertures, therefore there will be 250,000 apertures per m^2 , which exceeds the claimed 200,000 holes/ m^2 . This is equivalently an open area of 15%.

The minimum thickness of a thermoplastic layer is given as 0.5 mm on page 5, which is equivalently 0.0197 inches.

2. Claims 1-3, 5-9, 27, 28, 30-33, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Eklund et al (US 5,232,768).

Eklund discloses a dewatering wet press fabric designed to prevent re-wetting of a web as the web and fabric pass through a press nip in a paper machine. The fabric of Figure 2 comprises a fibrous web-contacting layer (6) and attached thereto an apertured barrier layer (7') which contacts the lower press element. The barrier layer can be a polymeric sheet (column 3, lines 62-70). The fibrous web-contacting layer is equivalently an air distribution layer and the apertured barrier layer comprising a polymeric sheet is equivalently a perforated film layer. The fabric can comprise a fibrous layer on both sides of the barrier layer (as given by example in Figure 3E).

Eklund reads on the fabric of claim 27, the press of claim 1 which comprises the fabric and first and second opposing press elements, and the papermaking machine of claim 53 which comprises the fabric and the press. Note that the press arrangement includes two opposing rolls. A vented roll and a second press felt are suggested (column 1, lines 50-68).

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3. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Schiel (US 6,159,880).

Schiel discloses a two sided felt comprising a batt layer for supporting the paper web and a porous carrier layer to which the batt is attached. The carrier layer can be a perforated foil (column 3, line 10). Figure 2 shows a felt with a fibrous batt (2) and perforated foil carrier layer (1). Schiel teaches that the felt reduces rewet of the web in the pressing zone. The fibrous batt layer is equivalently an air distribution layer and the carrier layer is a perforated film layer.

4. Claims 27, 28, 31, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Albert (US 4,541,895).

Albert discloses a papermaker's fabric comprising a plurality of impervious nonwoven sheets which are adhesively laminated together and apertured in a way to control permeability. For wet press felt applications, the fabric comprises laminated layers with a batt material secured thereto. The batt layer is equivalently an air distribution layer and the carrier layers are equivalently perforated film layers.

5. Claims 1-3, 5, 7, 8, 27, 28, 30, 31, 33, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al (US 6,140,260).

Johnson discloses a papermaking press felt having a perforated flow control layer which impedes rewetting of a web when the felt and web are relieved of pressure upon exit of a press nip. The felt comprises a fibrous batt layer on both sides of the flow control layer, with the surface of one batt layer being disposed toward the web.

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Figure 1 shows the press felt disposed between two opposing press rolls. Figure 2 shows the second batt layer (24) as being a backside layer. Figures 8, 10, and 11 have two flow control layers. In particular, Figure 10 shows the flow control layers as being beneath the web-contacting batt layer and Figure 11 shows the flow control layers as being above the backside batt layer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 10-16, 52, and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Webster (US 4,675,079) in view of Eklund et al (US 5,232,768) and Hulit et al (US 4,309,246).

Webster discloses a four-roll press with press nips and an enclosed air chamber whereby a web is pressed in the enclosed chamber to remove water. The web can be transported through the air chamber by one felt or two felts (Figure 3). Webster differs from the present invention, in that he does not expressly disclose using an anti-rewet felt. Eklund (described above) discloses an anti-rewet felt for use in a press of a paper machine for preventing water from rewetting the web as the web and felt pass together out of the pressure zone. The felt of Eklund comprises an air distribution layer and perforated plastic layer attached thereto. At the time of the invention, it

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would have been obvious to one skilled in the art to modify the air press of Webster to include an anti-rewet felt, such as one disclosed by Eklund, to prevent rewetting of the web and remove as much water from the web as possible.

The press of Webster comprises at least two opposing press elements (press rolls) forming a nip, and a single felt or two felts. The press of Webster also comprises a pressurized enclosure formed as a box by the periphery of the press rolls. The enclosure contains pressurized air. When the fabric of Eklund is used as the first felt, the air distribution layer is directed to the web side and the perforated layer lies on the press element (roll). The first felt is arranged between the web and a press roll. The second felt is arranged between the web and the enclosure.

The press of Webster combined with the anti-rewet felt of Eklund performs the methods of conveying and dewatering a fiber web by providing an air press with a nip and pressurized chamber, providing two fabrics for carrying the web through the press, and displacing the water from the web by means of the pressurized chamber.

Hulit is further cited here to exemplify that it is well known to provide a press felt having a three-dimensional structure for the purpose of creating an imprint in the fiber web. Such a structure for either felt used in Webster would be an obvious modification to one skilled in the art.

Allowable Subject Matter

Claim 22, 23, 34-37 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject:

Claims 22 and 23 are allowable for further providing the press unit with a second fabric having more than three layers and arranged between the web and first press element

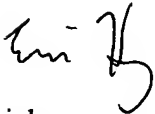
Claims 34-37 and 44 are allowable for reciting features of a woven air distribution layer.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


jeh